

## 40 CFR Ch. I (7-1-14 Edition)

As stated in §63.9991, you must comply with the applicable operating limits:

If you demonstrate compliance using . . .	You must meet these operating limits . . .
1. PM CPMS for an existing EGU.	Maintain the 30-boiler operating day rolling average PM CPMS output at or below the highest 1-hour average measured during the most recent performance test demonstrating compliance with the filterable PM, total non-mercury HAP metals (total HAP metals, for liquid oil-fired units), or individual non-mercury HAP metals (individual HAP metals including Hg, for liquid oil-fired units) emissions limitation(s).
2. PM CPMS for a new EGU ...	Maintain the 30-boiler operating day rolling average PM CPMS output determined in accordance with the requirements of §63.10023(b)(2) and obtained during the most recent performance test run demonstrating compliance with the filterable PM, total non-mercury HAP metals (total HAP metals, for liquid oil-fired units), or individual non-mercury HAP metals (individual HAP metals including Hg, for liquid oil-fired units) emissions limitation(s).

TABLE 5 TO SUBPART UUUUU OF PART 63—PERFORMANCE TESTING REQUIREMENTS

To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using <sup>2</sup> . . .
1. Filterable Particulate matter (PM).	Emissions Testing ..      OR PM CEMS	a. Select sampling ports location and the number of traverse points. b. Determine velocity and volumetric flow-rate of the stack gas. c. Determine oxygen and carbon dioxide concentrations of the stack gas. d. Measure the moisture content of the stack gas. e. Measure the filterable PM concentration.  f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.  OR a. Install, certify, operate, and maintain the PM CEMS. b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.	Method 1 at Appendix A–1 to part 60 of this chapter. Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A–1 or A–2 to part 60 of this chapter. Method 3A or 3B at Appendix A–2 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981. <sup>3</sup> Method 4 at Appendix A–3 to part 60 of this chapter. Method 5 at Appendix A–3 to part 60 of this chapter. For positive pressure fabric filters, Method 5D at Appendix A–3 to part 60 of this chapter for filterable PM emissions. Note that the Method 5 front half temperature shall be 160° ±14 °C (320° ±25 °F). Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).  Performance Specification 11 at Appendix B to part 60 of this chapter and Procedure 2 at Appendix F to Part 60 of this chapter. Part 75 of this chapter and §§ 63.10010(a), (b), (c), and (d).  Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).
2. Total or individual non-Hg HAP metals	Emissions Testing ..	a. Select sampling ports location and the number of traverse points.	Method 1 at Appendix A–1 to part 60 of this chapter.

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To conduct a performance test for the following pollutant . . . .	Using . . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . . .	Using <sup>2</sup> . . . .
		<p>b. Determine velocity and volumetric flow-rate of the stack gas.</p> <p>c. Determine oxygen and carbon dioxide concentrations of the stack gas.</p> <p>d. Measure the moisture content of the stack gas.</p> <p>e. Measure the HAP metals emissions concentrations and determine each individual HAP metals emissions concentration, as well as the total filterable HAP metals emissions concentration and total HAP metals emissions concentration.</p> <p>f. Convert emissions concentrations (individual HAP metals, total filterable HAP metals, and total HAP metals) to lb/MMBtu or lb/MWh emissions rates.</p>	<p>Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A-1 or A-2 to part 60 of this chapter.</p> <p>Method 3A or 3B at Appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.<sup>3</sup></p> <p>Method 4 at Appendix A-3 to part 60 of this chapter.</p> <p>Method 29 at Appendix A-8 to part 60 of this chapter. For liquid oil-fired units, Hg is included in HAP metals and you may use Method 29, Method 30B at Appendix A-8 to part 60 of this chapter; for Method 29, you must report the front half and back half results separately.</p> <p>Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).</p>
3. Hydrogen chloride (HCl) and hydrogen fluoride (HF).	<p>Emissions Testing ..</p> <p>OR</p> <p>HCl and/or HF CEMS.</p>	<p>a. Select sampling ports location and the number of traverse points.</p> <p>b. Determine velocity and volumetric flow-rate of the stack gas.</p> <p>c. Determine oxygen and carbon dioxide concentrations of the stack gas.</p> <p>d. Measure the moisture content of the stack gas.</p> <p>e. Measure the HCl and HF emissions concentrations.</p> <p>f. Convert emissions concentration to lb/MMBtu or lb/MWh emissions rates.</p> <p>OR</p> <p>a. Install, certify, operate, and maintain the HCl or HF CEMS.</p> <p>b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.</p> <p>c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.</p>	<p>Method 1 at Appendix A-1 to part 60 of this chapter.</p> <p>Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A-1 or A-2 to part 60 of this chapter.</p> <p>Method 3A or 3B at Appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.<sup>3</sup></p> <p>Method 4 at Appendix A-3 to part 60 of this chapter.</p> <p>Method 26 or Method 26A at Appendix A-8 to part 60 of this chapter or Method 320 at Appendix A to part 63 of this chapter or ASTM 6348-03<sup>3</sup> with (1) additional quality assurance measures in footnote<sup>4</sup> and (2) spiking levels nominally no greater than two times the level corresponding to the applicable emission limit. Method 26A must be used if there are entrained water droplets in the exhaust stream.</p> <p>Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).</p> <p>Appendix B of this subpart.</p> <p>Part 75 of this chapter and §§ 63.10010(a), (b), (c), and (d).</p> <p>Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).</p>
4. Mercury (Hg) .....	Emissions Testing ..	<p>a. Select sampling ports location and the number of traverse points.</p> <p>b. Determine velocity and volumetric flow-rate of the stack gas.</p> <p>c. Determine oxygen and carbon dioxide concentrations of the stack gas.</p>	<p>Method 1 at Appendix A-1 to part 60 of this chapter or Method 30B at Appendix A-8 for Method 30B point selection.</p> <p>Method 2, 2A, 2C, 2F, 2G or 2H at Appendix A-1 or A-2 to part 60 of this chapter.</p> <p>Method 3A or 3B at Appendix A-1 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.<sup>3</sup></p>

To conduct a performance test for the following pollutant . . . .	Using . . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . . .	Using <sup>2</sup> . . . .
	OR	d. Measure the moisture content of the stack gas. e. Measure the Hg emission concentration.  f. Convert emissions concentration to lb/TBtu or lb/GWh emission rates.  OR Hg CEMS ..... a. Install, certify, operate, and maintain the CEMS. b. Install, certify, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates.	Method 4 at Appendix A–3 to part 60 of this chapter. Method 30B at Appendix A–8 to part 60 of this chapter, ASTM D6784 <sup>3</sup> , or Method 29 at Appendix A–8 to part 60 of this chapter; for Method 29, you must report the front half and back half results separately. Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).  Sections 3.2.1 and 5.1 of Appendix A of this subpart.  Part 75 of this chapter and §§ 63.10010(a), (b), (c), and (d).  Section 6 of Appendix A to this subpart.
	OR Sorbent trap monitoring system.	OR a. Install, certify, operate, and maintain the sorbent trap monitoring system. b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems. c. Convert emissions concentrations to 30 boiler operating day rolling average lb/TBtu or lb/GWh emissions rates.	Sections 3.2.2 and 5.2 of Appendix A to this subpart. Part 75 of this chapter and §§ 63.10010(a), (b), (c), and (d).  Section 6 of Appendix A to this subpart.
	OR LEE testing .....	OR a. Select sampling ports location and the number of traverse points.  b. Determine velocity and volumetric flow-rate of the stack gas.  c. Determine oxygen and carbon dioxide concentrations of the stack gas.  d. Measure the moisture content of the stack gas.  e. Measure the Hg emission concentration.  f. Convert emissions concentrations from the LEE test to lb/TBtu or lb/GWh emissions rates.	Single point located at the 10% centroidal area of the duct at a port location per Method 1 at Appendix A–1 to part 60 of this chapter or Method 30B at Appendix A–8 for Method 30B point selection. Method 2, 2A, 2C, 2F, 2G, or 2H at Appendix A–1 or A–2 to part 60 of this chapter or flow monitoring system certified per Appendix A of this subpart. Method 3A or 3B at Appendix A–1 to part 60 of this chapter, or ANSI/ASME PTC 19.10–1981, <sup>3</sup> or diluent gas monitoring systems certified according to Part 75 of this chapter. Method 4 at Appendix A–3 to part 60 of this chapter, or moisture monitoring systems certified according to part 75 of this chapter. Method 30B at Appendix A–8 to part 60 of this chapter; perform a 30 operating day test, with a maximum of 10 operating days per run (i.e., per pair of sorbent traps) or sorbent trap monitoring system or Hg CEMS certified per Appendix A of this subpart. Method 19 F-factor methodology at Appendix A–7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).

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To conduct a performance test for the following pollutant . . .	Using . . .	You must perform the following activities, as applicable to your input- or output-based emission limit . . .	Using <sup>2</sup> . . .
		g. Convert average lb/TBtu or lb/GWh Hg emission rate to lb/year, if you are attempting to meet the 22.0 lb/year threshold.	Potential maximum annual heat input in TBtu or potential maximum electricity generated in GWh.
5. Sulfur dioxide (SO <sub>2</sub> ).	SO <sub>2</sub> CEMS .....	<p>a. Install, certify, operate, and maintain the CEMS.</p> <p>b. Install, operate, and maintain the diluent gas, flow rate, and/or moisture monitoring systems.</p> <p>c. Convert hourly emissions concentrations to 30 boiler operating day rolling average lb/MMBtu or lb/MWh emissions rates.</p>	<p>Part 75 of this chapter and §§ 63.10010(a) and (f).</p> <p>Part 75 of this chapter and §§ 63.10010(a), (b), (c), and (d).</p> <p>Method 19 F-factor methodology at Appendix A-7 to part 60 of this chapter, or calculate using mass emissions rate and electrical output data (see § 63.10007(e)).</p>

<sup>1</sup> Regarding emissions data collected during periods of startup or shutdown, see §§ 63.10020(b) and (c) and § 63.10021(h).

<sup>2</sup> See Tables 1 and 2 to this subpart for required sample volumes and/or sampling run times.

<sup>3</sup> Incorporated by reference, see § 63.14.

<sup>4</sup> When using ASTM D6348-03, the following conditions must be met: (1) The test plan preparation and implementation in the Annexes to ASTM D6348-03, Sections A1 through A8 are mandatory; (2) For ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent (%R) must be determined for each target analyte (see Equation A5.5); (3) For the ASTM D6348-03 test data to be acceptable for a target analyte, %R must be 70% ≤ R ≤ 130%; and (4) The %R value for each compound must be reported in the test report and all field measurements corrected with the calculated %R value for that compound using the following equation:

$$\text{Reported Result} = \frac{(\text{Measured Concentration in Stack})}{\%R} \times 100$$

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TABLE 6 TO SUBPART UUUUU OF PART 63—ESTABLISHING PM CPMS OPERATING LIMITS

As stated in § 63.10007, you must comply with the following requirements for establishing operating limits:

If you have an applicable emission limit for . . .	And you choose to establish PM CPMS operating limits, you must . . .	And . . .	Using . . .	According to the following procedures . . .
1. Filterable Particulate matter (PM), total non-mercury HAP metals, individual non-mercury HAP metals, total HAP metals, or individual HAP metals for an existing EGU.	Install, certify, maintain, and operate a PM CPMS for monitoring emissions discharged to the atmosphere according to § 63.10010(h)(1).	Establish a site-specific operating limit in units of PM CPMS output signal (e.g., milliamps, mg/acm, or other raw signal).	Data from the PM CPMS and the PM or HAP metals performance tests.	<p>1. Collect PM CPMS output data during the entire period of the performance tests.</p> <p>2. Record the average hourly PM CPMS output for each test run in the three run performance test.</p> <p>3. Determine the highest 1-hour average PM CPMS measured during the performance test demonstrating compliance with the filterable PM or HAP metals emissions limitations.</p>